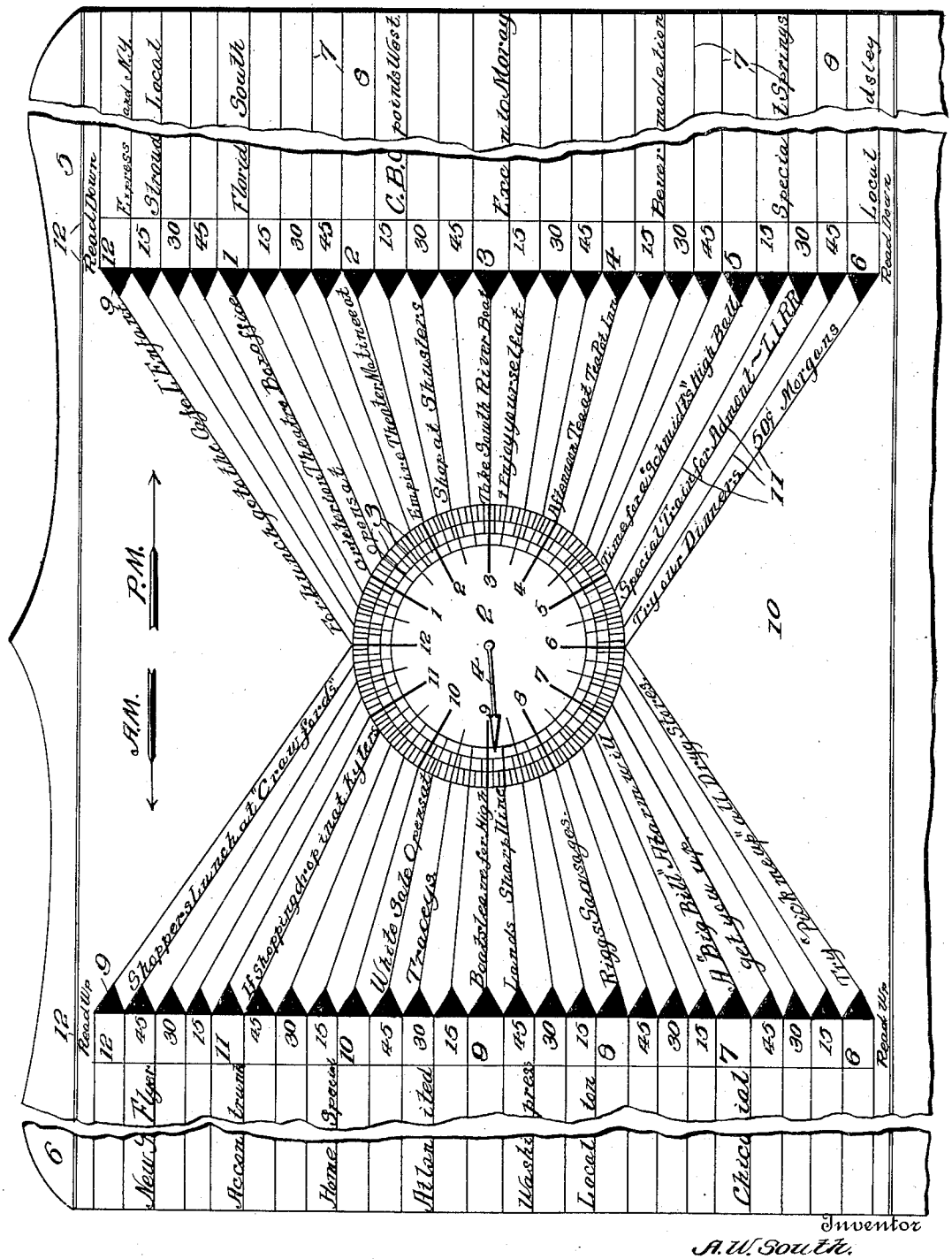
A. W. SOUTH.

CLOCK DIAL FOR PROGRAM CLOCKS.

APPLICATION FILED DEC. 22, 1911.

1,068,538.

Patented July 29, 1913.



Witnesses

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AUGUSTUS W. SOUTH, OF RED OAK, IOWA.

CLOCK-DIAL FOR PROGRAM-CLOCKS.

1,068,538. Specification of Letters Patent. Patented July 29, 1913.

Application filed December 22, 1911. Serial No. 667,309.

To all whom it may concern:

Be it known that I, AUGUSTUS W. SOUTH, citizen of the United States, residing at Red Oak, in the county of Montgomery and State of Iowa, have invented certain new and useful Improvements in Clock-Dials for Program-Clocks, of which the following is a specification.

My invention relates to clocks, watches or like time indicators, and particularly to program or bulletin clocks with especial reference to the dials thereof.

One object of my invention is to so graduate the dial of a timepiece that the time may be easily read even though only one hand, the hour hand, is employed, thus simplifying the clock mechanism and obviating the confusion incident to two hands moving at different rates of speed around the same dial.

A further object is to provide in conjunction with a circular dial having radial graduations, either one or two bulletin boards divided by transverse lines into a series of transverse spaces, the lines being connected to the radial graduations of the clock dial by guide lines whereby each space upon the bulletin board or boards is connected to a corresponding time graduation so that the eye may be led either from any certain space upon the bulletin board to the appropriate time indication upon the dial of the clock or from any time indication to the corresponding space upon the board, thus providing means whereby any event indicated on a bulletin board or program may be correlated with any particular time mark on the clock dial or vice versa.

A further object is to provide in connection with the circular dial having radial graduations, a column or a pair of parallel columns, preferably vertically arranged, each column divided into horizontal spaces having time notations and each space connected by radial lines with the corresponding time mark on the circular dial. There is thus provided a means whereby the position of the hand or pointer on the circular dial may be readily noted and the exact time read, even though the central dial be relatively small, or even though the central dial be unprovided with any time notations.

A further object is to combine the vertically arranged dial denoting spaces with the bulletin boards above referred to so that the time for any particular event may be read in connection with the statement of the event itself.

My invention is illustrated in the accompanying drawing wherein the figure is a face view of a clock face showing the central dial, laterally disposed bulletins, and an intermediate dial.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

2 designates a circular dial of any suitable material and which may be the ordinary dial of a clock, watch or other timepiece. This dial is provided with radial graduations or time marks indicating hours, half hours, quarter hours and fractions thereof. The subdividing of each hour space may be carried to any degree required but preferably there is an indicating mark or graduation for each five minutes. The marks indicating the hours will naturally be the most conspicuous, the marks indicating the half hours the next in degree, the quarter hour marks of less prominence, and the five minute marks least prominent of all. In order that these marks may be easily read, the margin of the dial 2 is preferably provided with a series of three or more concentric circles, these circles being designated 3. The hour marks extend from the edge of the dial 2 inward, intersecting all of the circles 3 and extending beyond these circles toward the center of the dial. The half hour marks extend from the edge of the dial through the last circle but not so far toward the center of the dial as the hour marks. The quarter of an hour marks extend from the edge of the dial to the third circle but not beyond the same. The mark indicating the first five minutes after or before a half hour mark extends from the edge of the dial to the first circle 3 but not beyond the same, while the mark indicating the first five minutes before or after the half hour extends to but not though the second circle 3. It will thus be seen that the time marks grow longer from each half hour mark to each quarter hour mark and then grow shorter from the quarter hour mark to the next adjacent hour mark.

The clock mechanism may be of any suitable character and preferably the clock is provided with only one hand, 4, this being the ordinary hour hand of the clock and making a complete revolution around the

dial either in twelve or twenty-four hours, according to the style of clock, it being obvious that my invention may be equally as well applied to a 24 hour clock as to a 12 hour clock. Preferably the hour marks are numbered in the usual manner so that the hour may be read by means of the hand 4 alone.

Arranged preferably on opposite sides of the dial are the programs or bulletin boards 5 and 6, the board 5 corresponding, we will say, to that portion of the dial from 12 o'clock noon or midnight to 6 a. m. or 6 p. m., and the board 6 corresponding to that portion of the dial from 6 a. m. to 12 noon or 6 p. m. to midnight. In case the clock is a 24 hour clock, each bulletin board would correspond to twelve hours. We will assume, however, that it is a 12 hour clock and that one bulletin corresponds to the hours from six in the morning to twelve noon, and the other from twelve noon to six in the afternoon.

Each bulletin or program is divided by horizontal lines 7 into a vertically arranged series of spaces 8, each space corresponding to a particular instant of time. Preferably these spaces 8 correspond to each 15 minute graduation mark though a closer subdivision might be used if desired, this subdividing of the bulletin board into 15 minute spaces being merely for illustration. At the end of each space is preferably disposed a triangular mark 9 forming a bracket, the apex of the bracket pointing inward or toward the central clock dial 2. These brackets or triangles 9 are preferably placed upon what may be termed an intermediate dial 10 which surrounds the central dial 2 and extends from the central dial to the bulletin boards on each side. Extending across this intermediate dial are the radially arranged lead or guide lines 11, each extending from one of the graduation marks on the central dial to the apex of one of the triangular brackets 9. It is obvious that these guide lines 9 will be spaced apart and that advertising matter, announcements or other indicia may be placed within these spaces. The eye is thus led by means of the guide lines from any particular time mark upon the clock to the appropriate space on a bulletin or program.

Preferably and in order that not only the time may be easily read but the events stated on the program may be correlated with the proper time indicia, the bulletin is also provided with a column 12 immediately adjacent to the triangular brackets 9 wherein the time notation for each space 8 is set down. Thus the clock may be read by observing the position of the hour hand and following the line 11 leading from the adjacent graduation to the time notations in column 12 of one or the other of the bulletin boards. At the same time the events stated in the bulletin boards will be displayed in connection with stated time marks and thus the time for the occurrence of these events may be easily seen at any moment. It will, of course, be obvious that the right hand bulletin will be read downward and the left hand bulletin upward in accordance with the movement of the clock hand.

It is perfectly plain that for special purposes, such as places for entertainment, the clock may be made coextensive with any length of program or time-table so that one complete circuit of the hand or pointer will be made during the time of performance. Thus for theaters or other places of amusement, the hand of the clock will make one complete circuit in one, two or more hours, depending upon the length of the performance, while for railroad stations and the like, one complete circuit of the hand 4 may be made every 24 hours, the clock train being regulated accordingly.

My combination clock and program or bulletin board is particularly useful for schools, theaters, railway stations, and in all situations where a series of events is scheduled to take place each at its proper time. It may be furthermore pointed out that it is hardly any difficulty for even an ignorant person to read the time correctly on a clock having a dial as described, provided with the vertical columns 12 on each side of the main clock and with the lead lines 11 extending from the time graduations of the clock to the time notations in the columns 12. Even a child can note the position of the hour hand, follow the lead line extending from it and read the figures in the columns 12.

What I claim is:

1. A timepiece including a face having a central circular dial provided with radiating time graduations produced from the center of the dial, parallel vertically disposed bulletins arranged one on each side of the dial and laterally spaced therefrom along their whole extent, each bulletin being longer than the diameter of the dial and extending above and below the same, each bulletin having a series of defined horizontal indicia receiving spaces of equal size and corresponding to equal divisions of time, and diverging lines extending across the face of the timepiece, each extending from one of the time graduations on the dial to a corresponding space upon the bulletin, said diverging lines defining indicia receiving spaces.

2. A timepiece including a face having a central circular dial provided with radiating time graduations produced from the center of the dial, a hand mounted upon the axis passing through the center of the dial and moving over said time graduations,

parallel vertically disposed bulletins located one on each side of the dial and spaced therefrom, each bulletin being longer than the diameter of the dial and extending above and below the same, each bulletin having a series of defined horizontal indicia receiving spaces of equal size and corresponding to equal intervals of time, and diverging lines extending across the face of the timepiece, each line extending from one of the time graduations on the dial to a corresponding space on the bulletin, the said lines defining indicia receiving spaces, each of the indicia receiving spaces of the bulletin being provided with a time indicating character corresponding to the time indicating graduations with which said space is connected by the corresponding diverging line.

3. A timepiece including a face having a central circular dial provided with radiating time graduations produced from the center of the dial, parallel vertically disposed bulletins arranged one on each side of the dial and laterally spaced therefrom along their whole extent, each bulletin being longer than the diameter of the dial and extending above and below the same, each bulletin having a series of defined horizontal indicia receiving spaces of equal size and corresponding to equal division of time, and diverging lines extending across one face of the timepiece, each extending from one of the time graduations on the dial to a corresponding space upon the bulletin, said diverging lines defining indicia receiving spaces, each bulletin on its inside margin having a vertical line or lines defining vertical columns, the intersection of each horizontal space and such vertical columns being provided with a time designating character corresponding in value to the time graduation on the central timepiece with which said space is connected.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUSTUS W. SOUTH. [L.S.]

Witnesses:

GEORGE B. CARROLL,

A. E. SOURWINE.